

# Notice of Allowability

Application No.

10/809,398

Examiner

Matthew J. Song

Applicant(s)

FUKUYAMA ET AL.

Art Unit

1722

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/7/2006.
2. ☒ The allowed claim(s) is/are 1,2 and 4-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☒ Certified copies of the priority documents have been received in Application No. 10/247,539.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Goozner on 11/20/2006.

The application has been amended as follows:

- In the specification, delete paragraph [0001] on page 1 and INSERT the following heading and paragraph after the Title of the Invention and before the "Detailed Description of the Invention" on the first page of the Specification in the instant application as follow:

#### --Cross Reference To Related Application

This application is a divisional of U.S. Serial No. 10/247,539, filed September 20, 2002, now U.S. Pat. No. 6,744,076, the entire contents of which are herein incorporated by reference and for which priority is claimed under 35 U.S.C. § 120; and this application claims priority under 35 U.S.C § 119(a) on Patent Application No. JP 2002-070229 filed in Japan on March 14, 2002, the contents of which are herein incorporated by reference. --

- In the specification, on page 2, in lines 27-28, replace "at a density of 108 to 107/cm<sup>2</sup>" with "at a density of 10<sup>8</sup> to 10<sup>7</sup>/cm<sup>2</sup>".
- In the specification, on page 13, in line 32, replace "108" with "10<sup>8</sup>".

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- In the specification on page 14, in line 3, replace “108” with “10<sup>8</sup>”.
- In claim 8, line 2, replace “108” with “10<sup>8</sup>”.

### ***Withdrawn Rejections***

2. The provisional obviousness-type double patenting rejection of claims 1-2 over copending Application No. 10/937,344 has been withdrawn. The provision non-statutory provisional obviousness type double patenting rejection is the only rejection remaining and the instant application is the earlier filed application; therefore the provisional obviousness type double patenting rejection is withdrawn as required by MPEP 804 [R-5].

### **REASONS FOR ALLOWANCE**

3. The following is an examiner’s statement of reasons for allowance: The closest prior art is Nakamura et al (EP 0999640 A2) and Bolt (US 4,857,246). Nakamura et al teaches an initial nitriding treatment for forming a thin aluminum nitride single crystal film having a thickness not larger than 100 angstroms on a sapphire single crystal substrate and during this initial nitriding treatment a thin AlNO film having an average thickness of several tens micron-meters is formed ([0021] and [0036]). Nakamura et al does not teach or suggest a single crystalline aluminum nitride film as an outermost layer directly on a single crystalline aluminum oxide layer.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

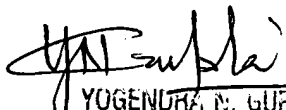
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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Song whose telephone number is 571-272-1468. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
YOGENDRA N. GUPTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

Matthew J Song  
Examiner  
Art Unit 1722

MJS  
November 21, 2006